

* SWBAT find action / reaction pairs

Sep 6-2:31 PM

Welcome!!!

SECA Physics
Tuesday 3 November 2015

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- * Pick up:
 - slip of paper (for later)
 - notebook

Centering...



Opening Question:

In outer space, how do space vehicles change direction, speed up, or slow down?

THROW/ SHOOT SOMETHING TO GO
OPPOSITE DIRECTION

<http://www.youtube.com/watch?v=P8sUVhR7xjE>

Clip of Wall-E

Sep 7-7:04 AM

Centering...

Demo: 2 roly chairs

What do you think is going to happen?

What did we observe?

NO MATTER WHO HOLDS / PULLS
WE BOTH MOVE

Two spring scales:

NO MATTER WHICH HELD/PULLED
(STRAIGHT LINE) SAME READING
ON BOTH SCALES

Sep 21-2:13 PM

1ST: OBJECTS AT REST TEND TO STAY AT REST
" " " " " " IN MOTION " " " " IN MOTION

2ND: $F = m \cdot a$

Big Idea: NEWTON'S 3RD LAW

For every **action** force, there is an equal and opposite **reaction** force!

I push on the wall. Does the wall push back?

YES! OR I'D FALL

Nov 9-7:37 AM

Worksheet

- Forces shown as arrows
- start at the point of contact

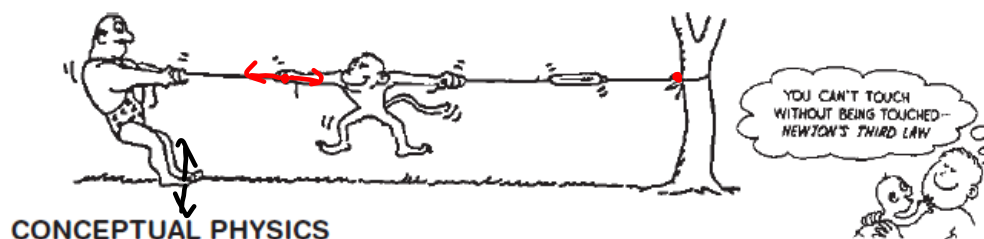
FOOT KICKS BALL



SAME SIZE
OPPOSITE
DIRECTION

BALL HITS FOOT

2. Draw arrows to show the chain of at least six pairs of action-reaction forces below.



Sep 21-2:13 PM

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. When one scale was held and the other scale pulled, which one showed a force on the scale?

- A. pulled scale
- B. held scale
- C. they both showed a force

2. True or False: Newton's 3rd Law states, "For every **action** force, there is an equal and opposite **reaction** force."

3. What's the "reaction force" to "Head bumps ball"?

Sep 14-7:28 AM

BUS HIT PUPPY
PUPPY HIT BUS

$$F_{\text{PUPPY}} = F_{\text{BUS}}$$

$$m A = M \downarrow a$$

Nov 3-11:06 AM